

Title (en)

FAST NEUTRON REACTOR AND NEUTRON REFLECTOR BLOCK OF A FAST NEUTRON REACTOR

Title (de)

SCHNELLER NEUTRONENREAKTOR UND NEUTRONENREFLEKTORBLOCK EINES SCHNELLEN NEUTRONENREAKTORS

Title (fr)

RÉACTEUR À NEUTRONS RAPIDES ET UNITÉ DE RÉFLECTEUR DE NEUTRONS POUR RÉACTEUR À NEUTRONS RAPIDES

Publication

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Application

EP 14869046 A 20141208

Priority

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- RU 2014000916 W 20141208

Abstract (en)

The invention relates to the field of nuclear engineering, and more particularly to designs for removable neutron reflector blocks for heavy liquid metal-cooled fast neutron reactors. The present fast neutron reactor contains a core consisting of heavy liquid metal-cooled fuel rods, and neutron reflector blocks, disposed around the core, which comprise a steel casing with at least one inlet opening in the side walls thereof above the core boundary, said inlet opening being intended for diverting part of the coolant flow from the space between the blocks into the casing, and at least one vertical pipe mounted in the casing, through which the diverted coolant flow, which has passed through the upper and lower boundaries of the core, enters the bottom part of the casing; also, on the outer side of the casing, above the inlet opening, there is mounted a throttling device for creating hydraulic resistance to the coolant flow in the space between the blocks. The technical result is an increase in the operating safety and the performance of a fast neutron reactor and a reduction in the heat exchange surface of the steam generator.

IPC 8 full level

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